Supporting Information

γ-Selective allylation of *(E)*-alkenylzinc iodides prepared by reductive coupling of arylacetylenes with alkyl iodides

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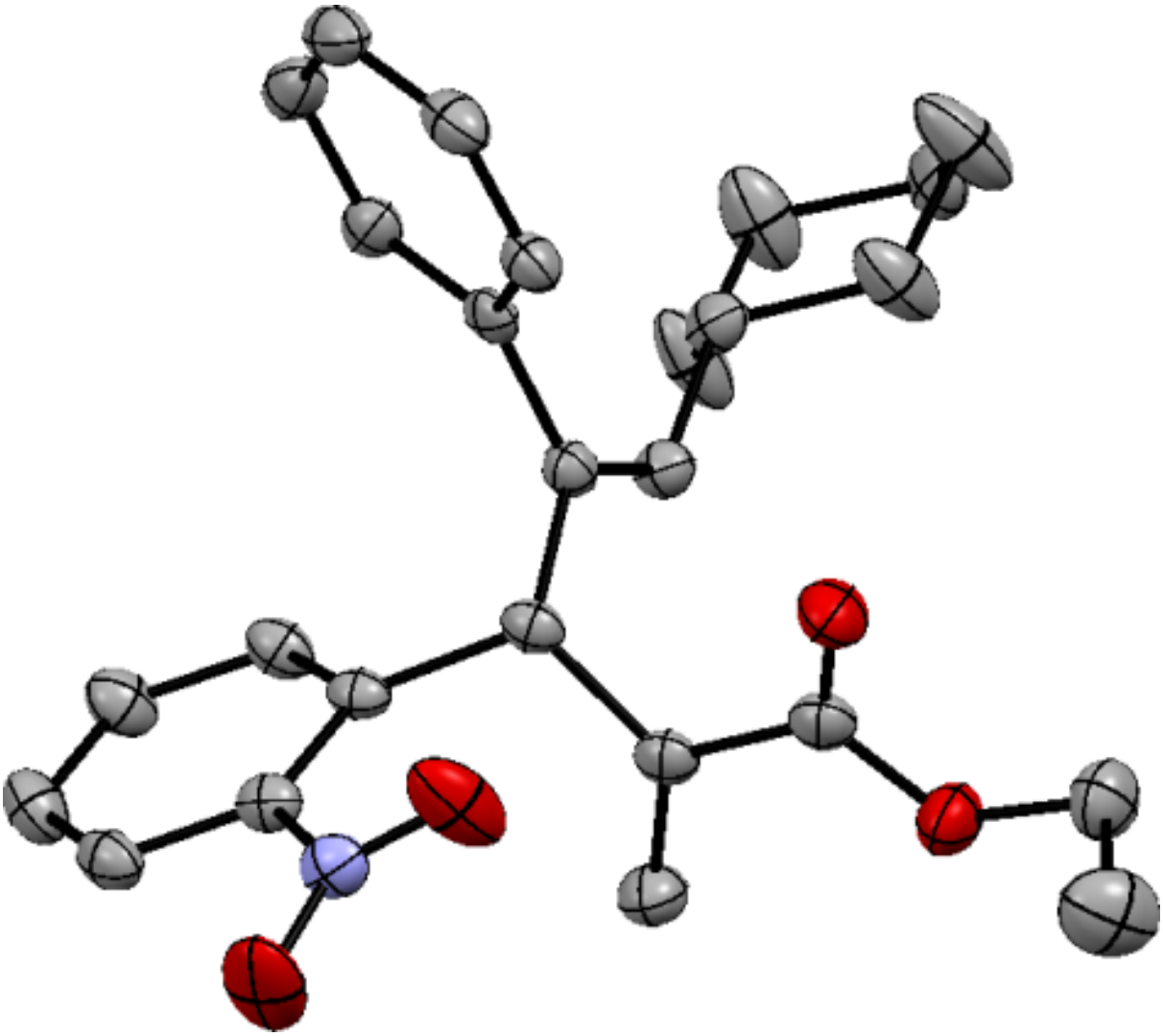
1. X-Ray data for compound 4k

Table 1. Crystal data and structure refinement for **4k**.

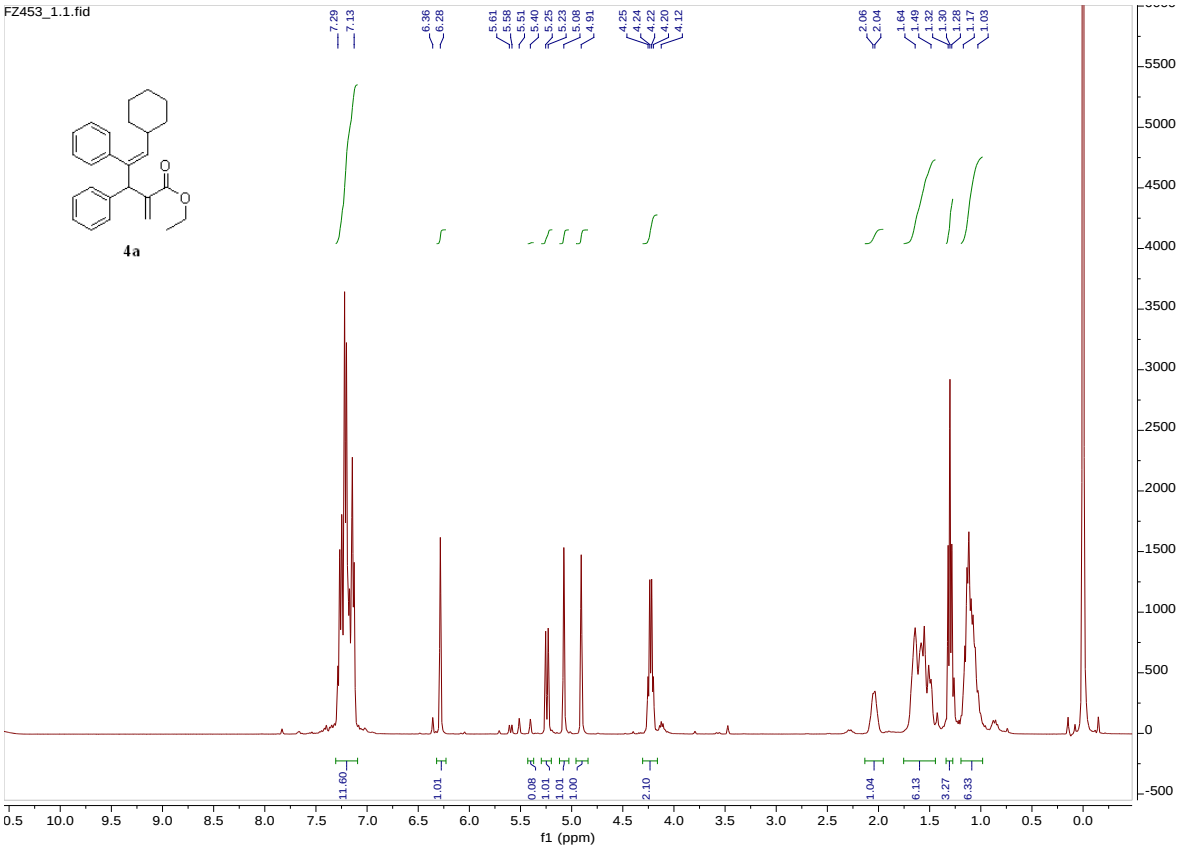
Empirical formula	$C_{26}H_{29}NO_4$
Formula weight	419.50
Temperature	140(2) K
Wavelength	0.71073 Å
Crystal system	Monoclinic
Space group	$P2_1/c$
Unit cell dimensions	a = 20.7774(14) Å, α = 90°
	b = 13.3315(5) Å, β = 114.656(8)°
	c = 17.7511(11) Å, γ = 90°
Volume	4468.6(5) $Å^3$
Z	8
Density (calculated)	1.247 Mg/m^3
Absorption coefficient	0.084 mm^{-1}
F(000)	1792
Crystal size	0.41 x 0.35 x 0.26 mm^3
Theta range for data collection	3.31 to 29.50°
Index ranges	$-27 \leq h \leq 26$, $-17 \leq k \leq 16$, $-23 \leq l \leq 22$
Reflections collected	49518
Independent reflections	11050 [R(int) = 0.0555]
Completeness to theta = 27.00°	99.4 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	1.000 and 0.806
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	11050 / 43 / 580
Goodness-of-fit on F^2	1.024
Final R indices [I>2sigma(I)]	R1 = 0.0603, wR2 = 0.1352
R indices (all data)	R1 = 0.1040, wR2 = 0.1574
Largest diff. peak and hole	0.518 and -0.309 $e.Å^{-3}$

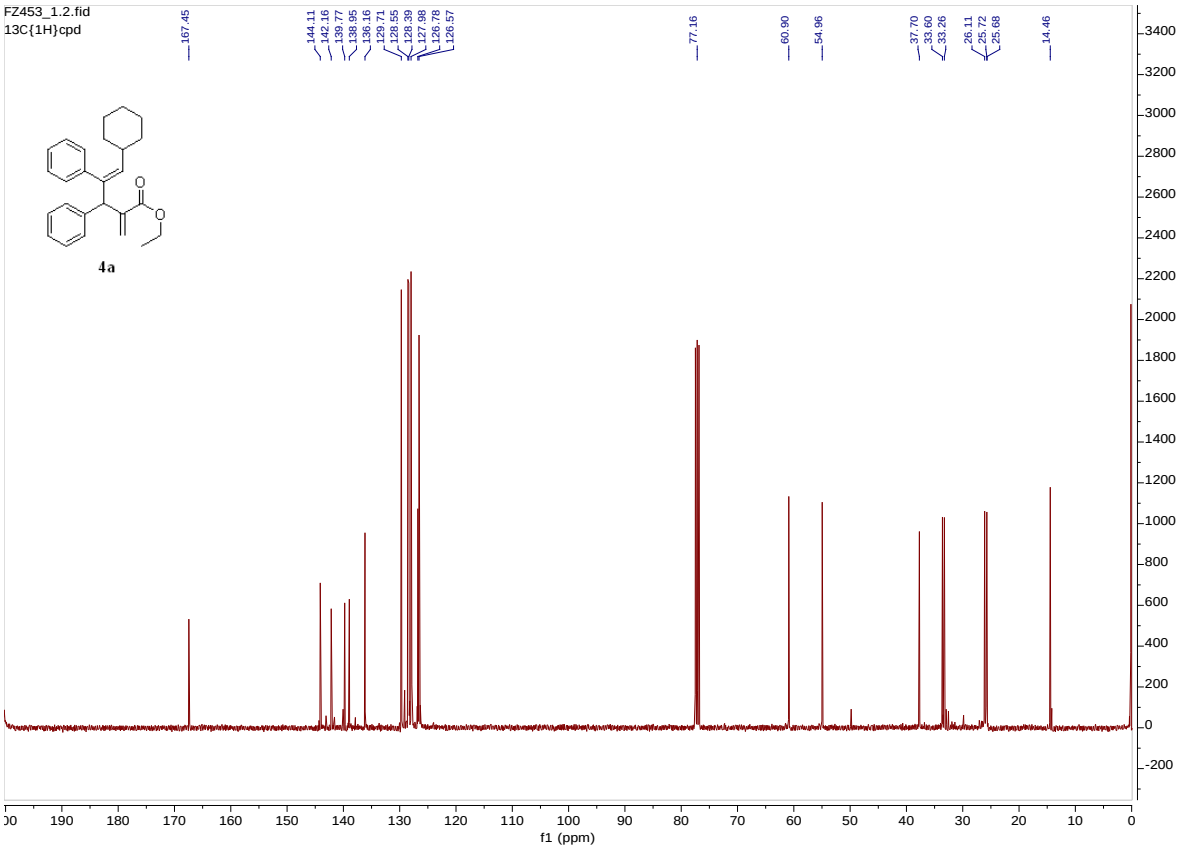
2. Thermal ellipsoid plot of the structure of 4k.

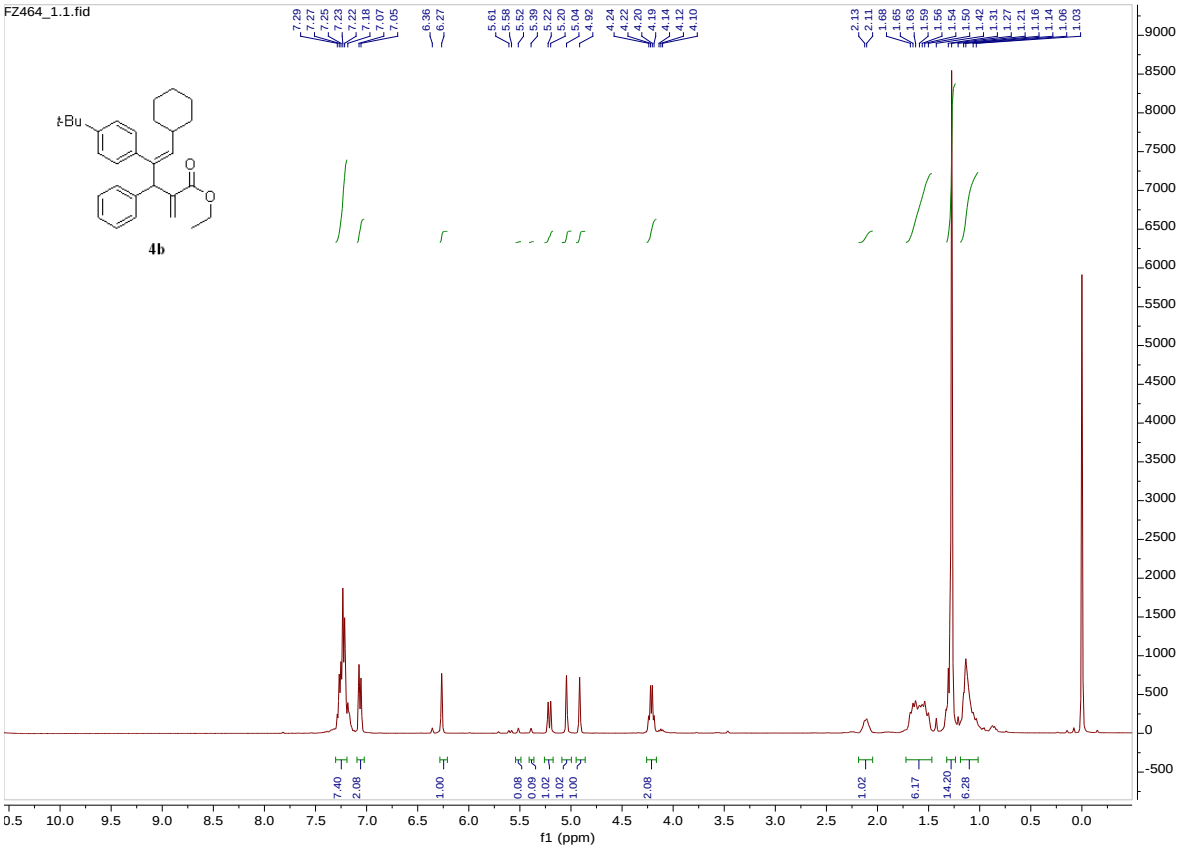


Thermal ellipsoids are drawn at 50% probability level. Hydrogen atoms are omitted. Color code: red for O; blue for N; grey for C.

3. NMR spectra



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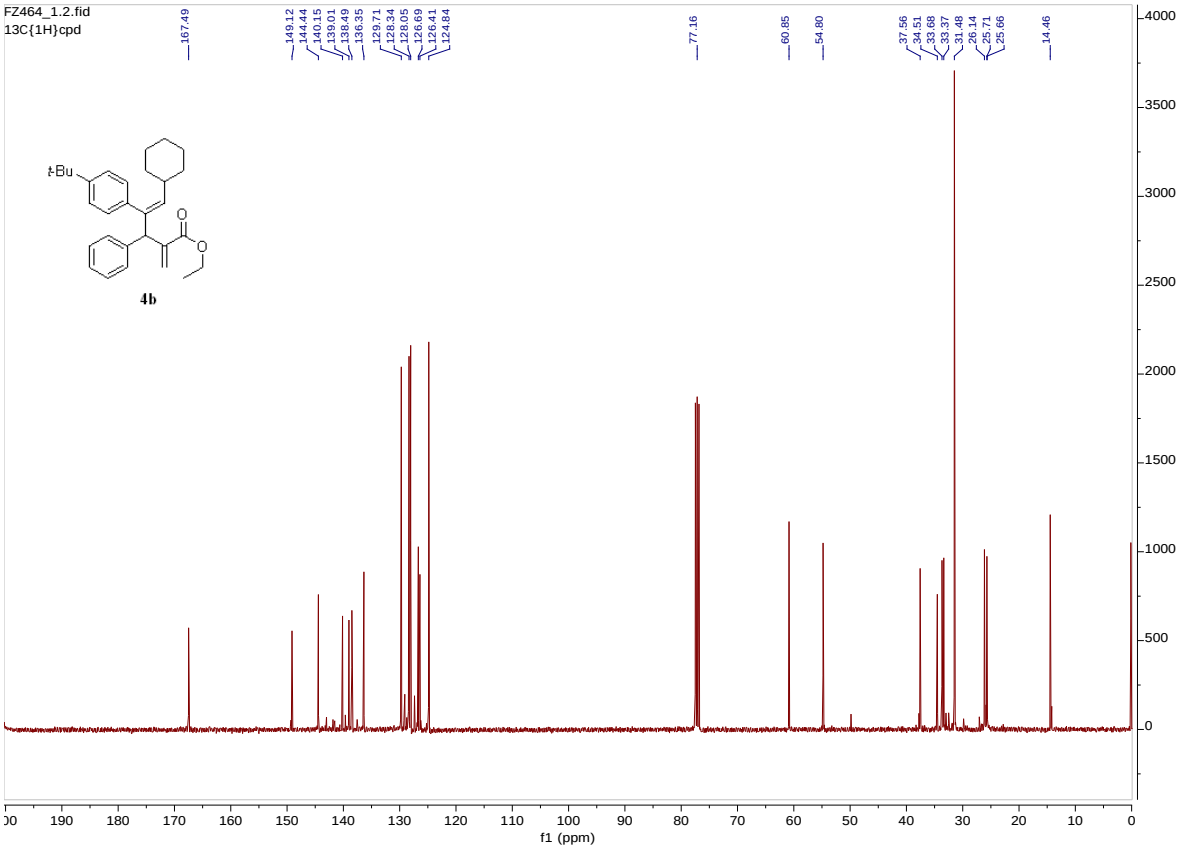
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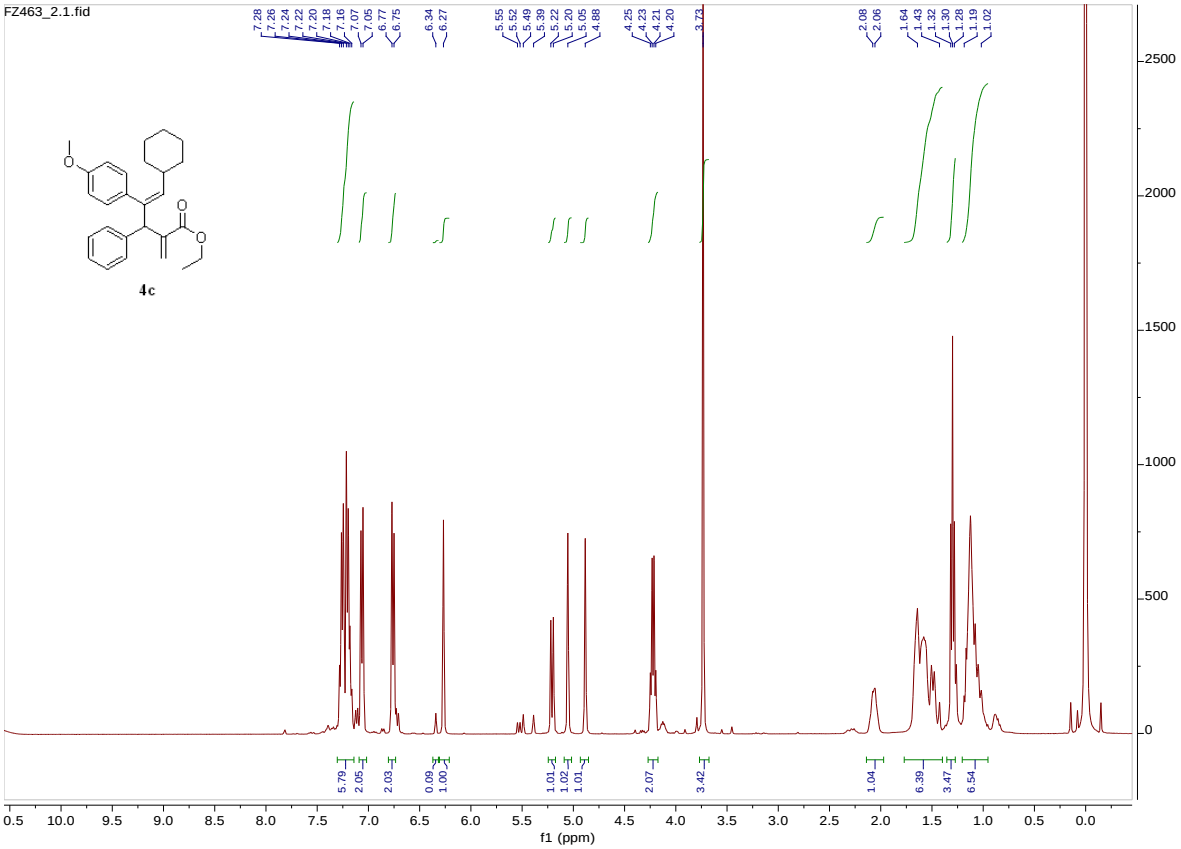
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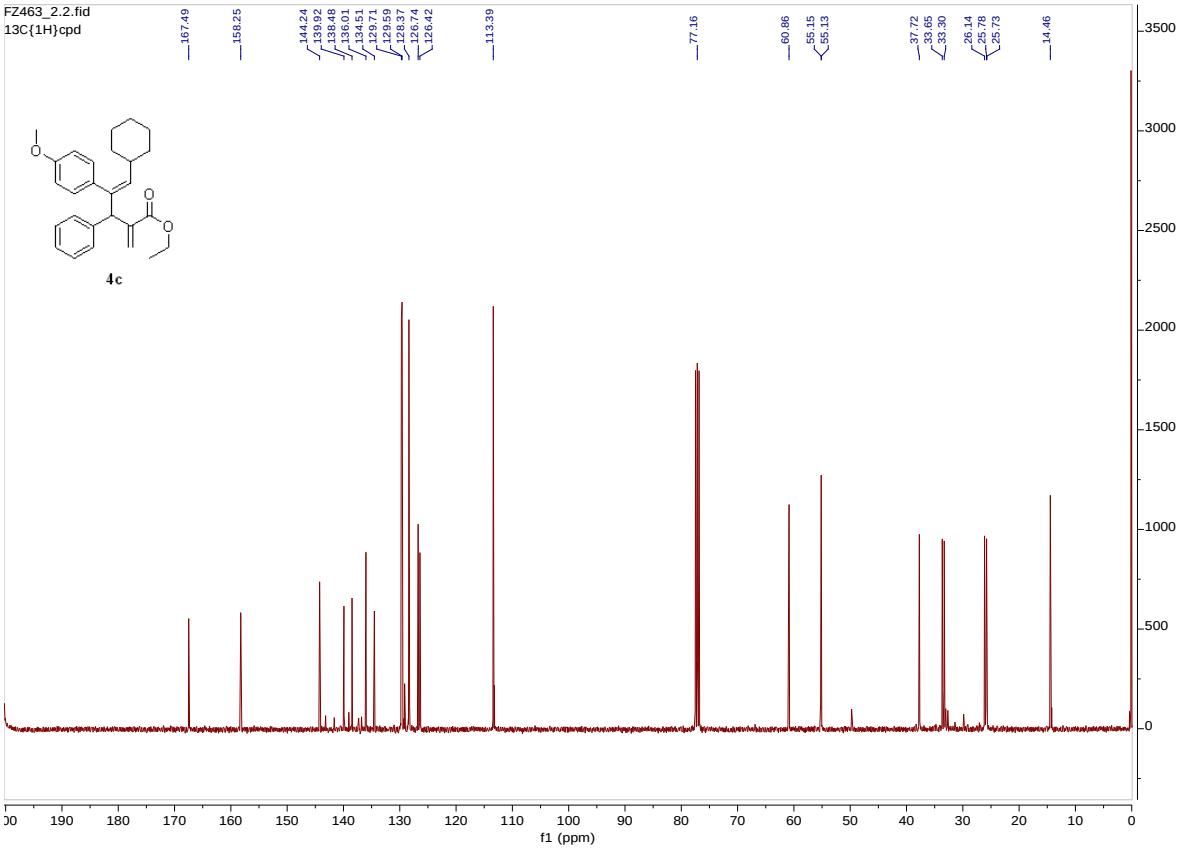
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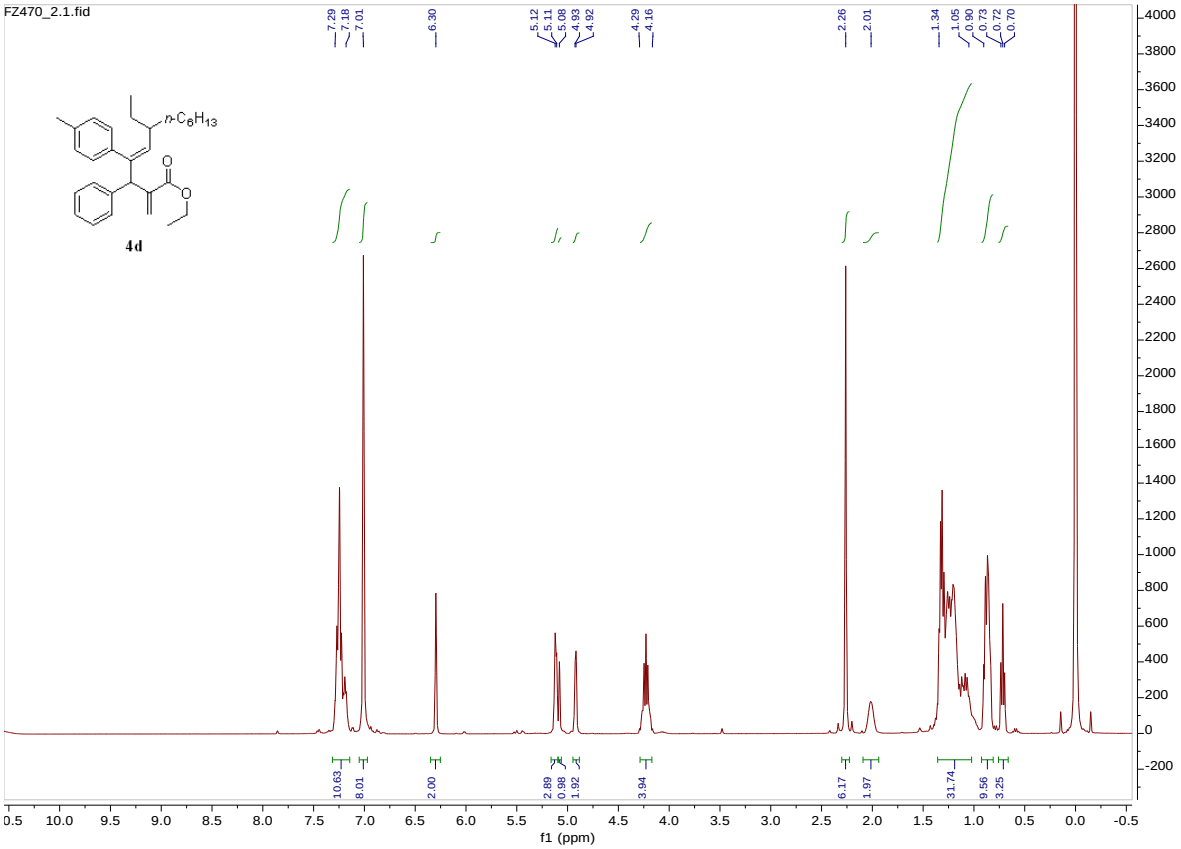
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0.70
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O
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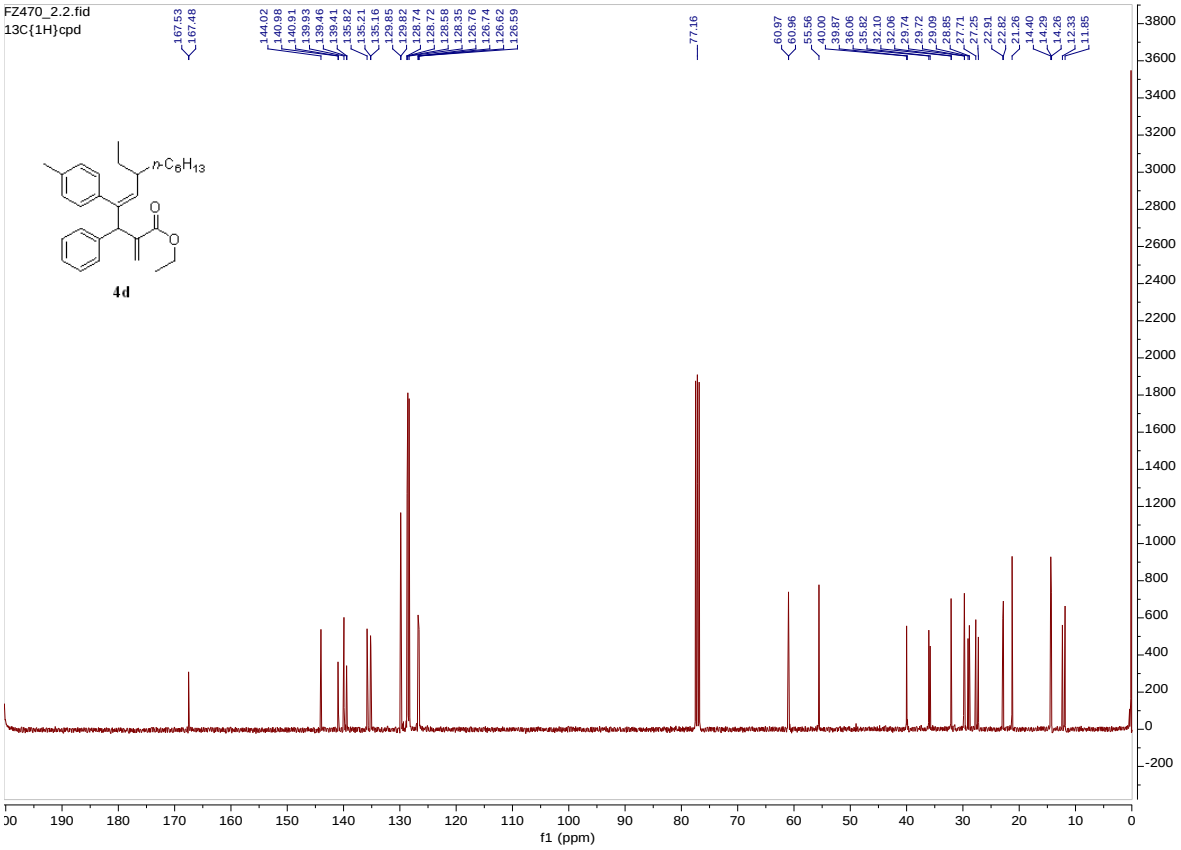
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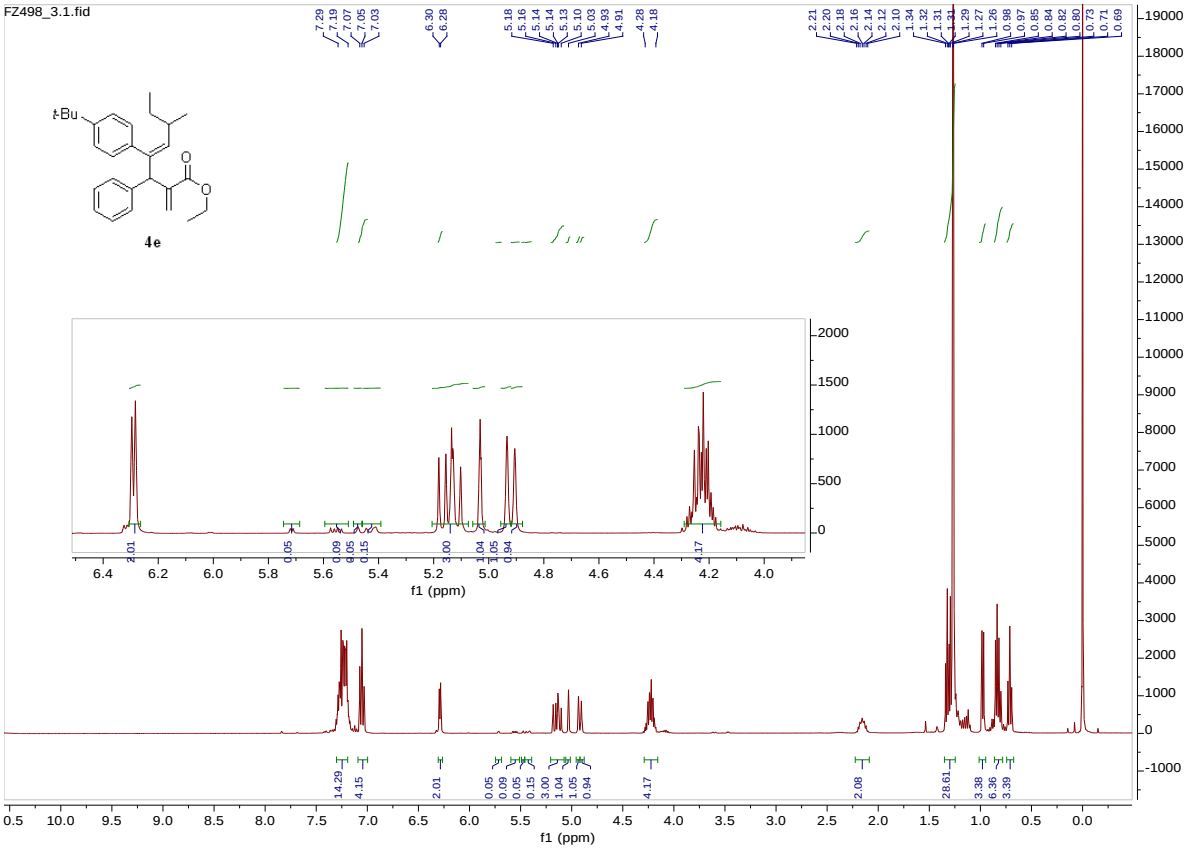
4d
f1 (ppm)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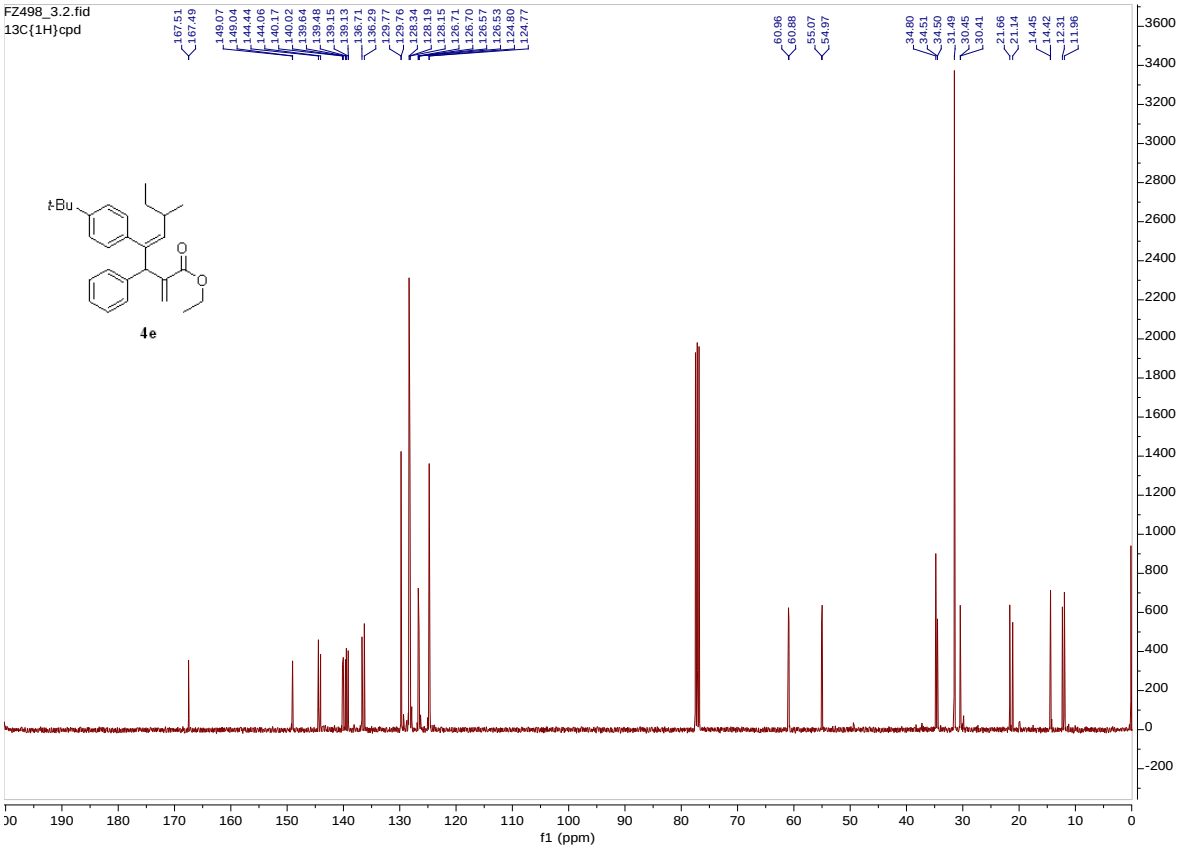
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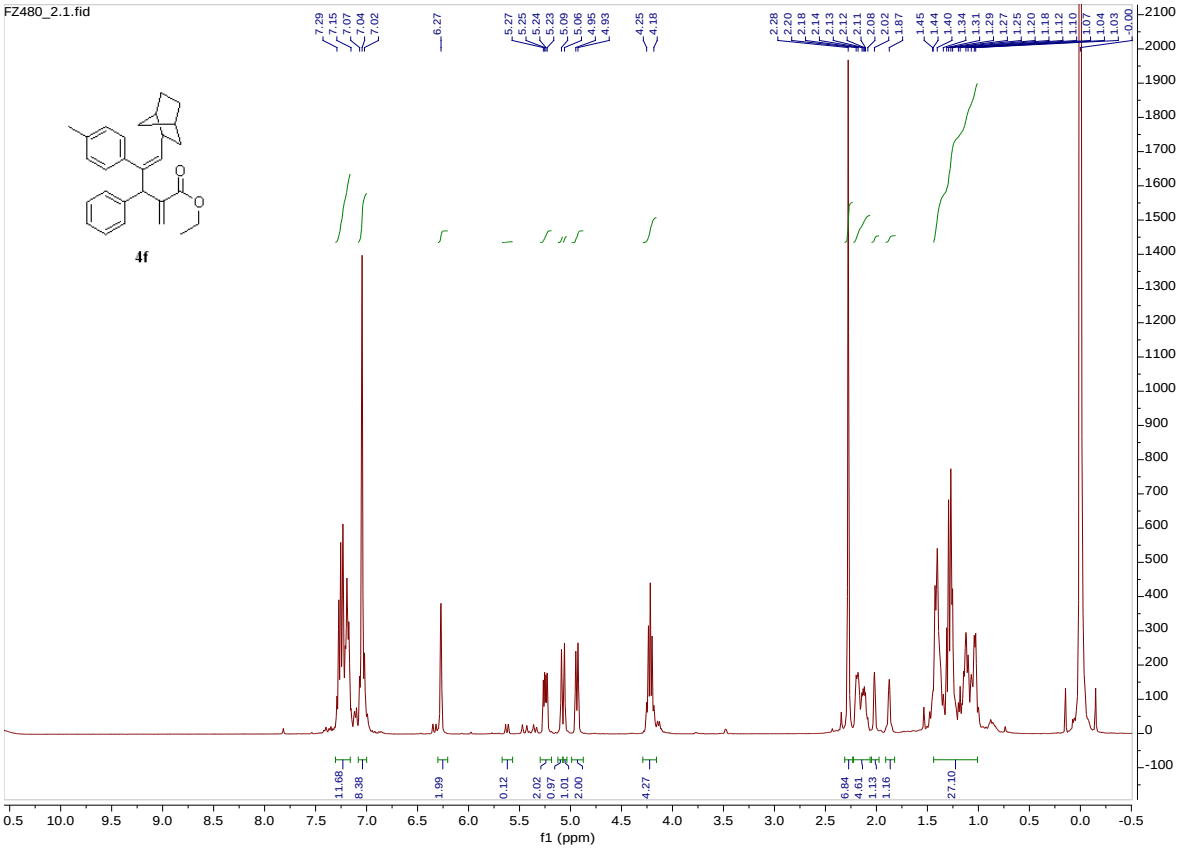
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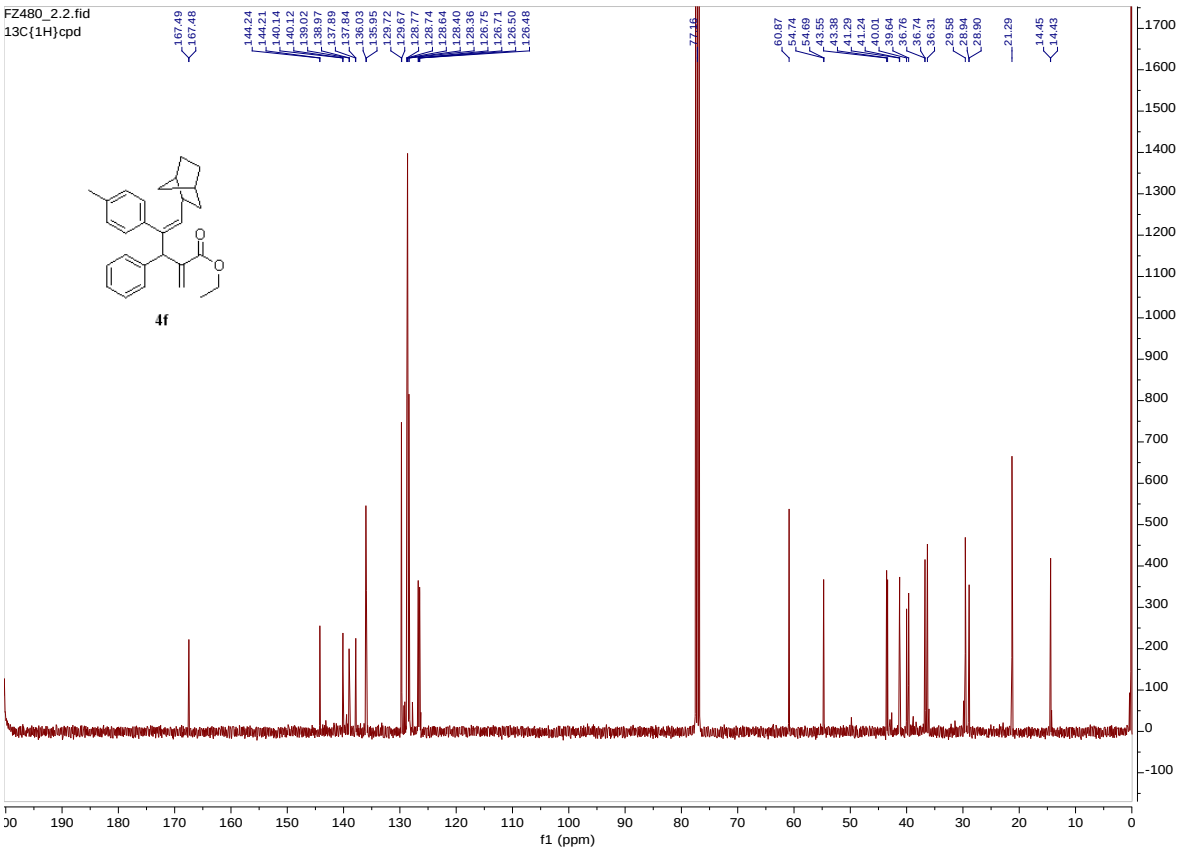
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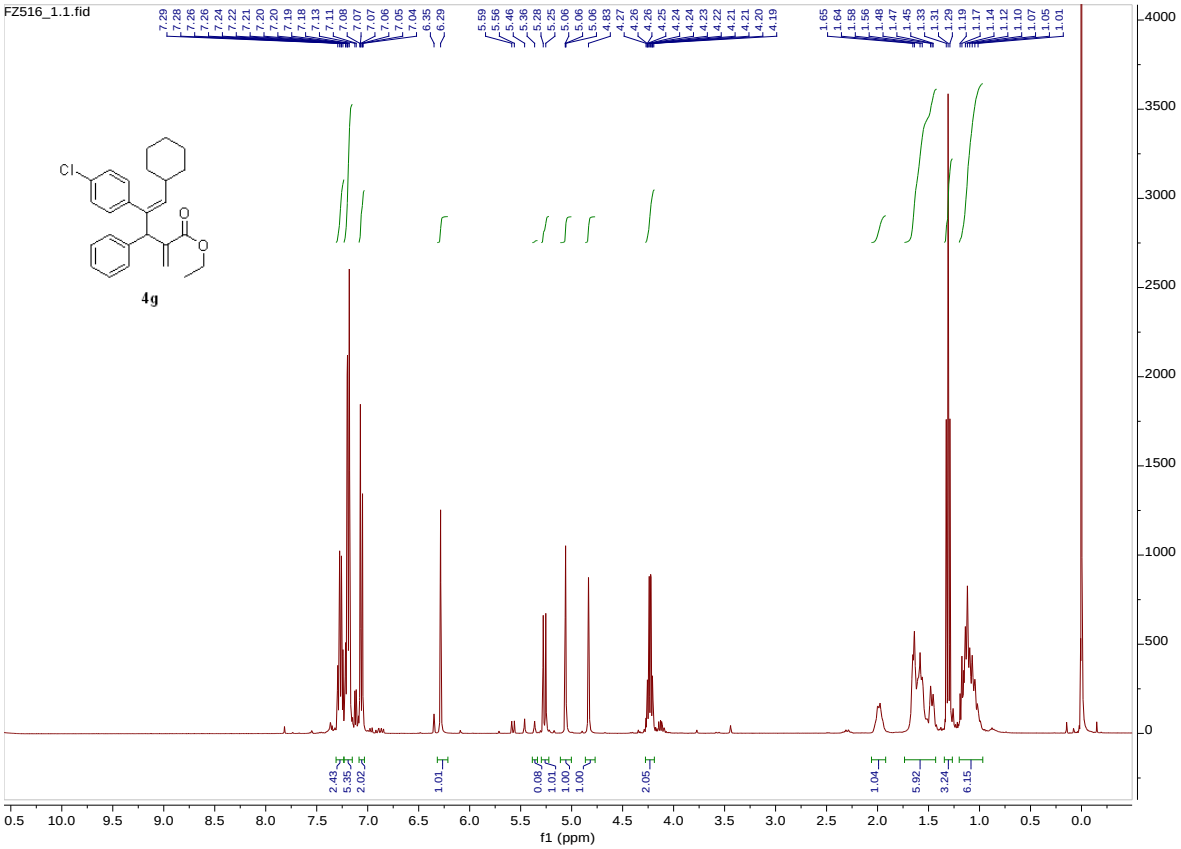
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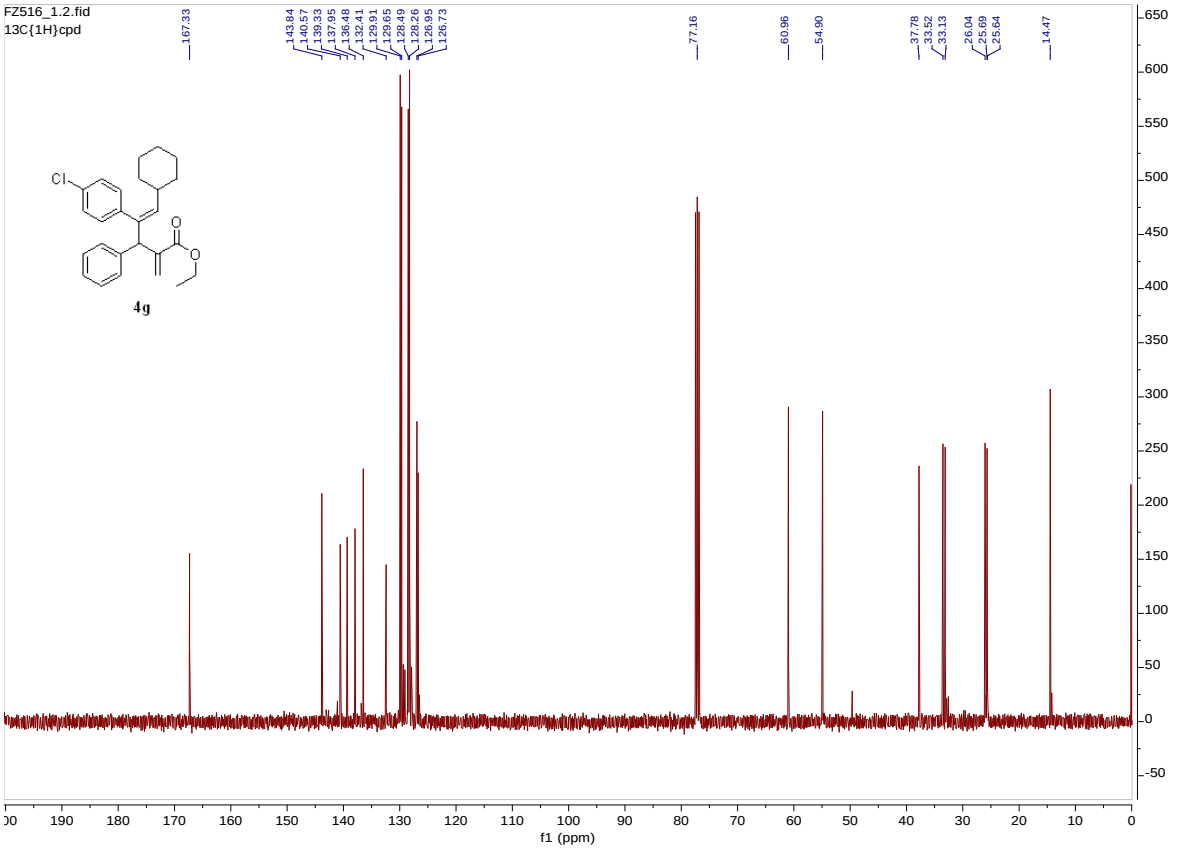
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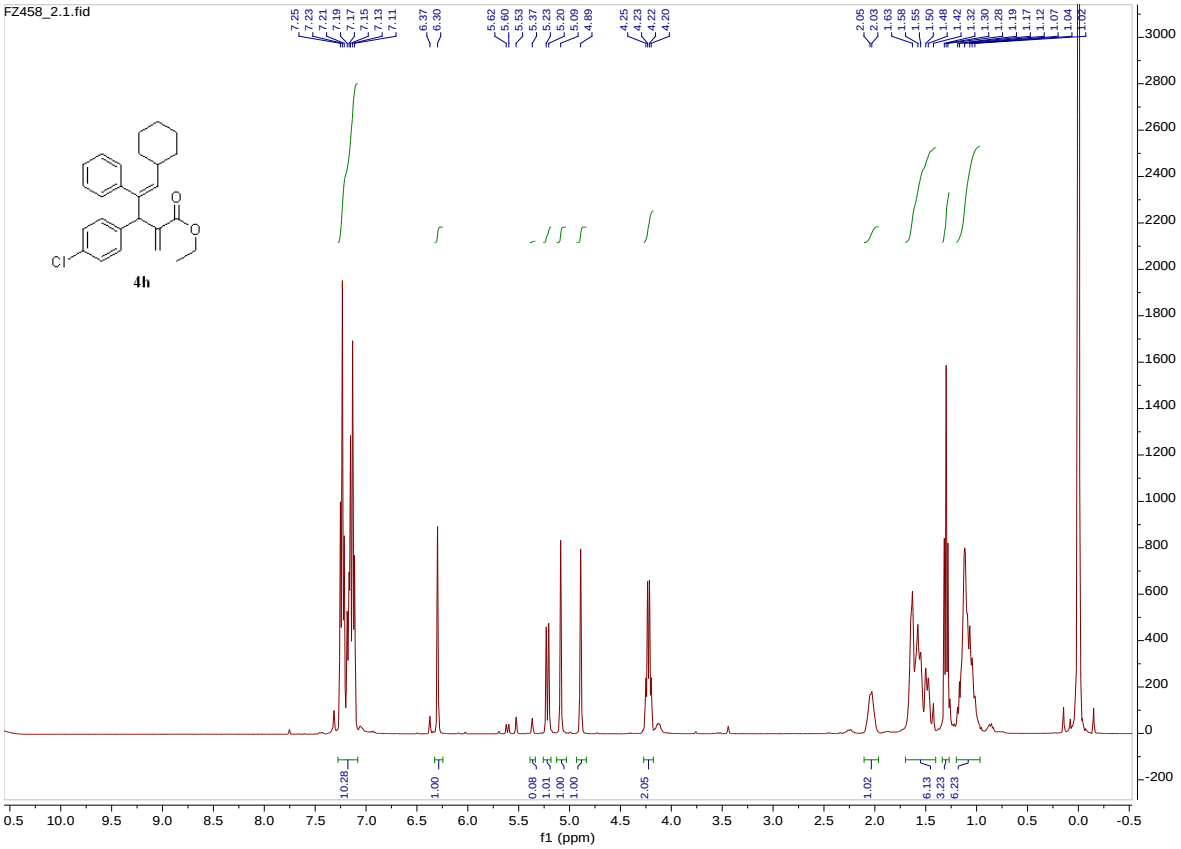
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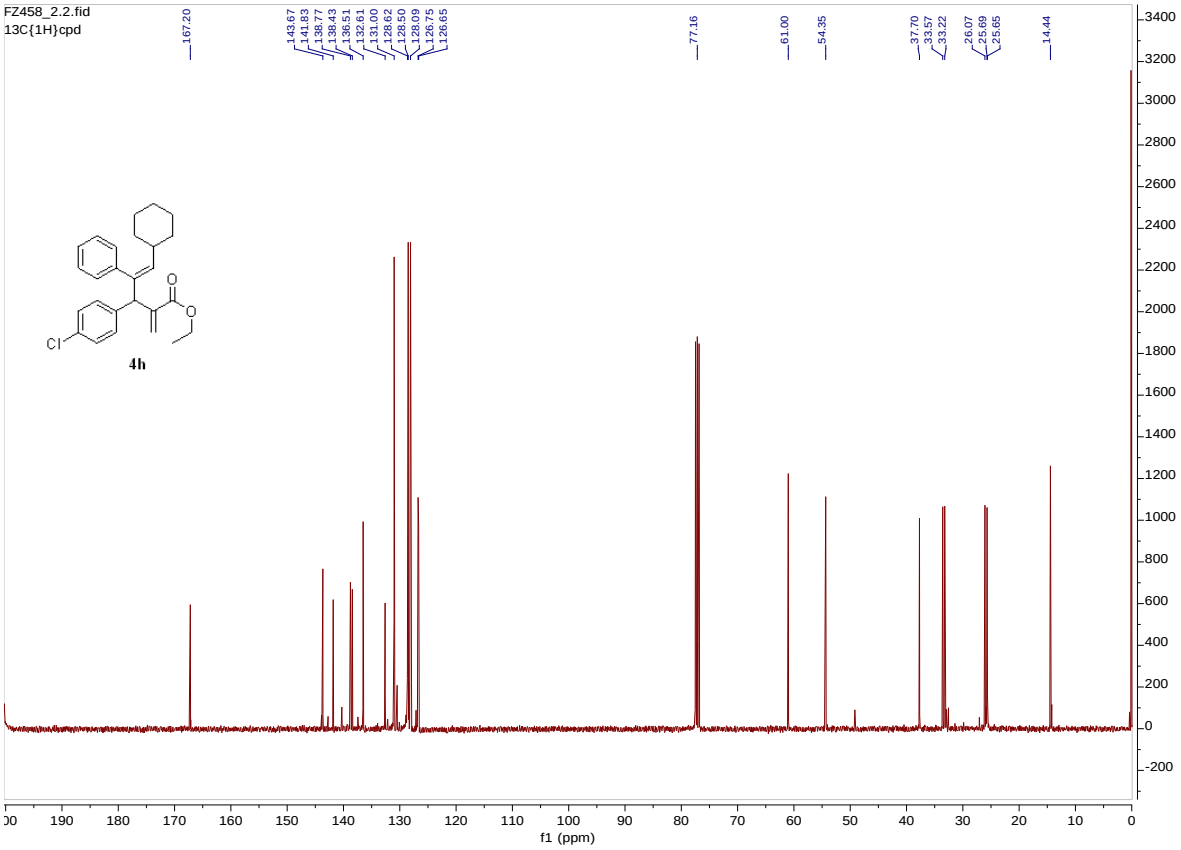
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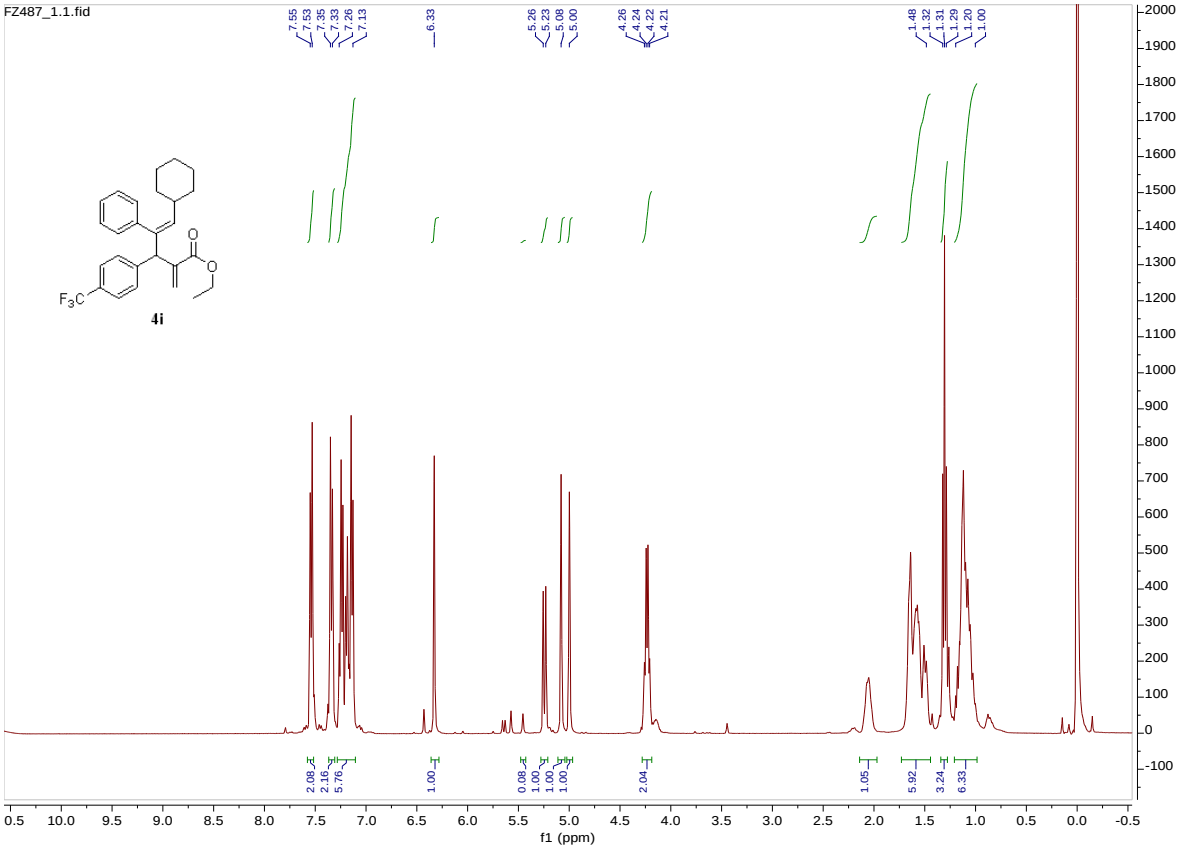
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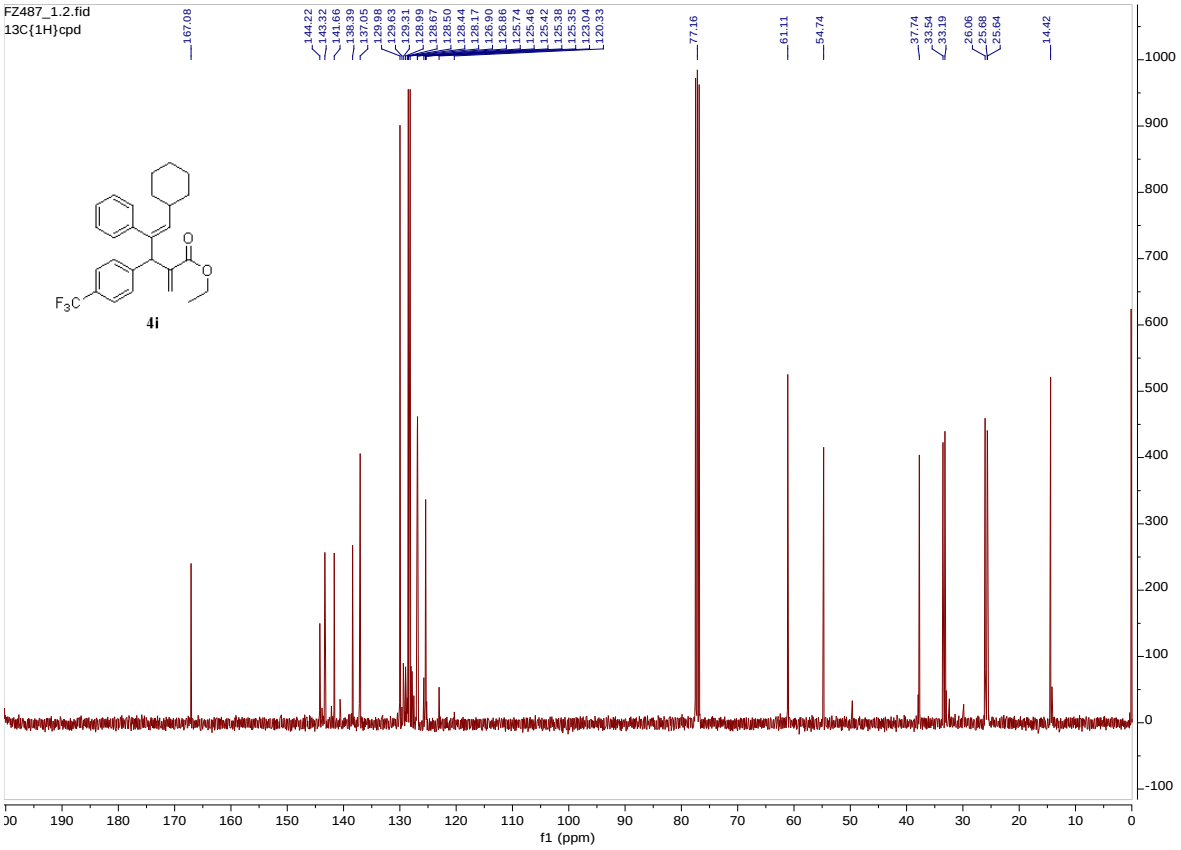
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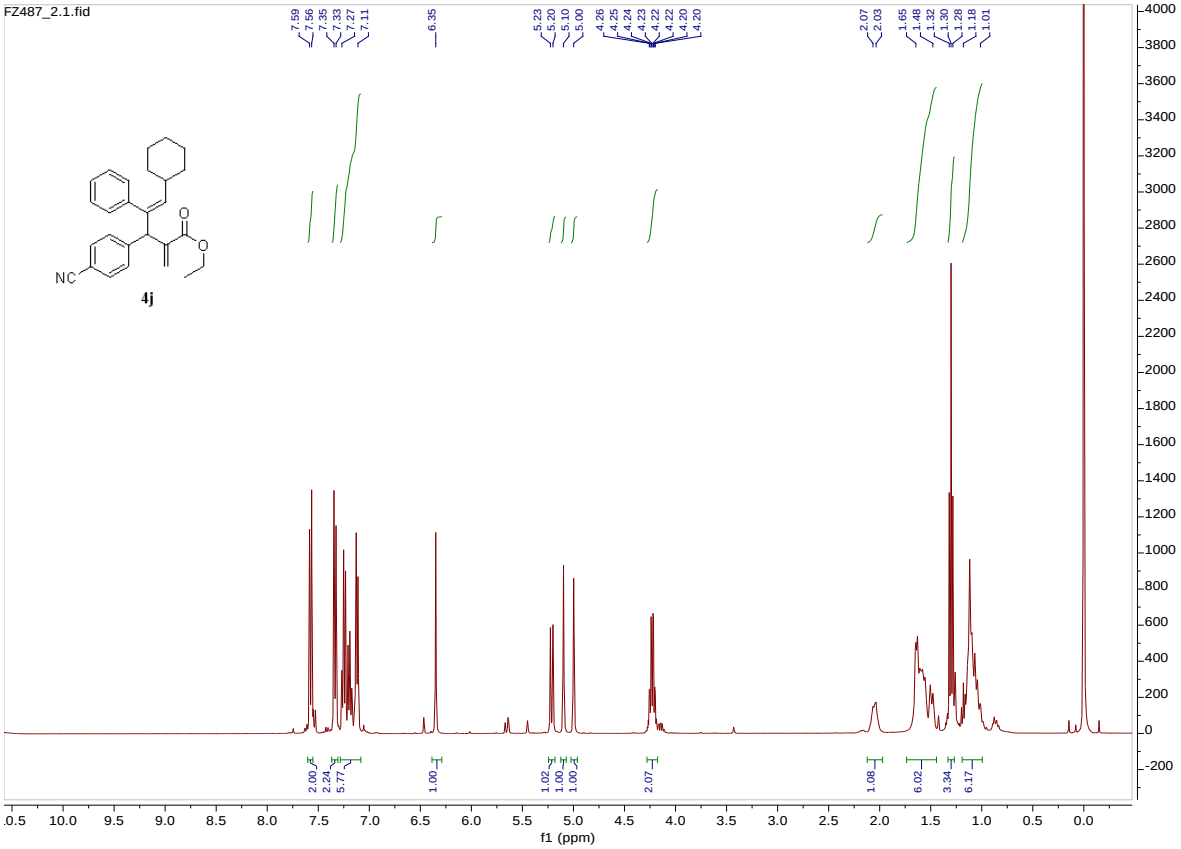
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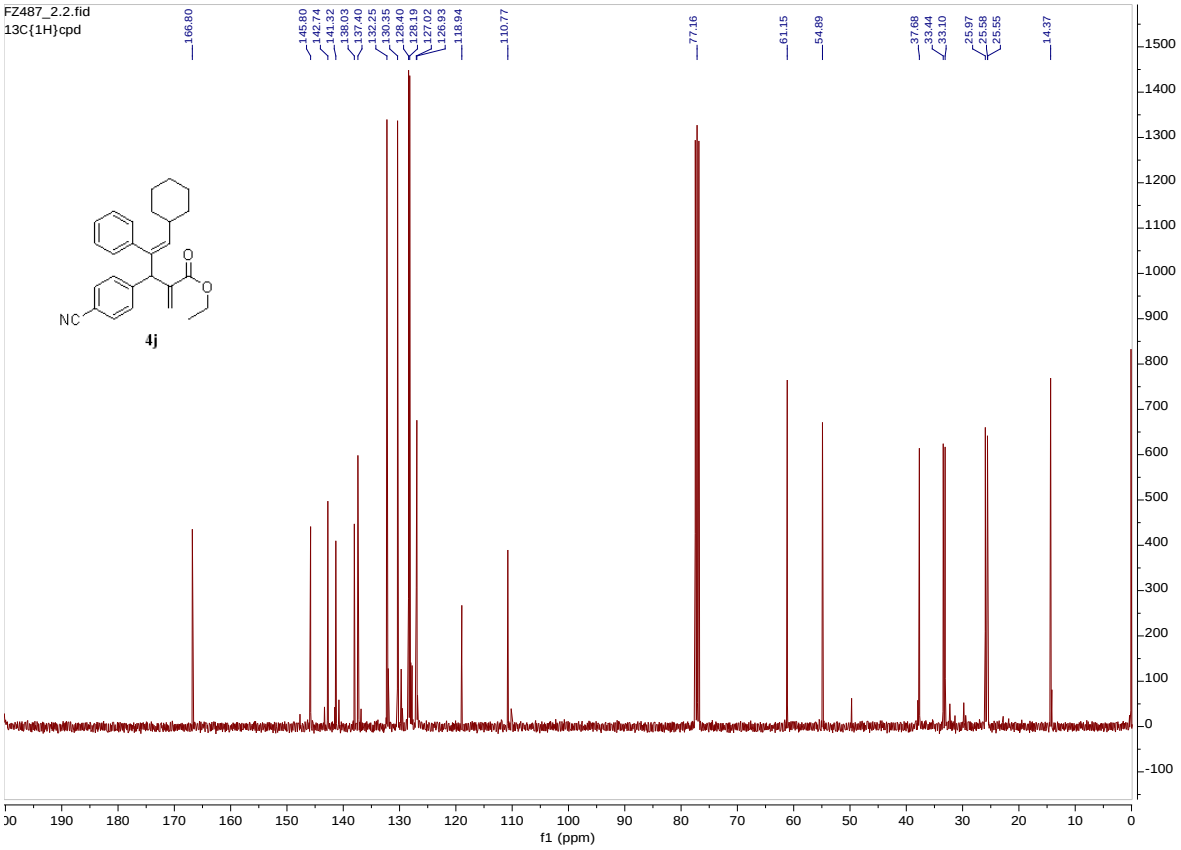
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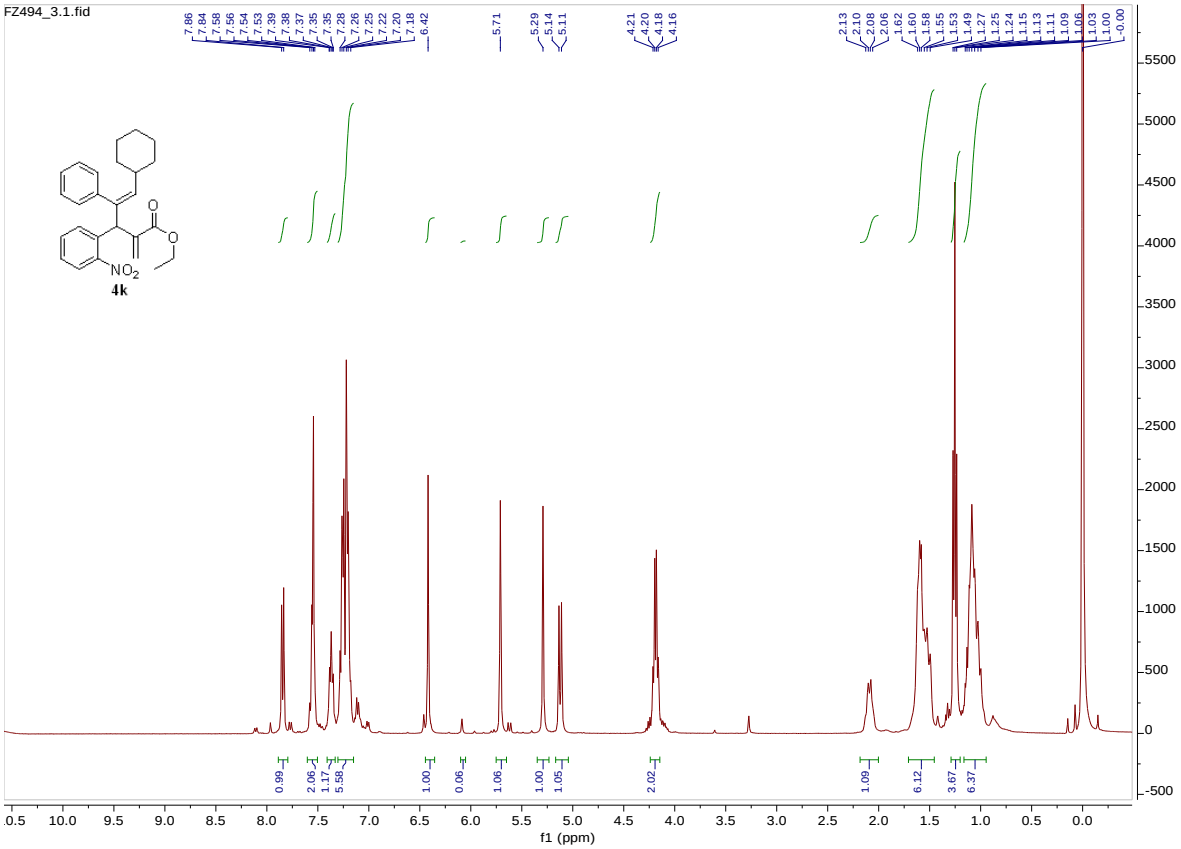
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NO2
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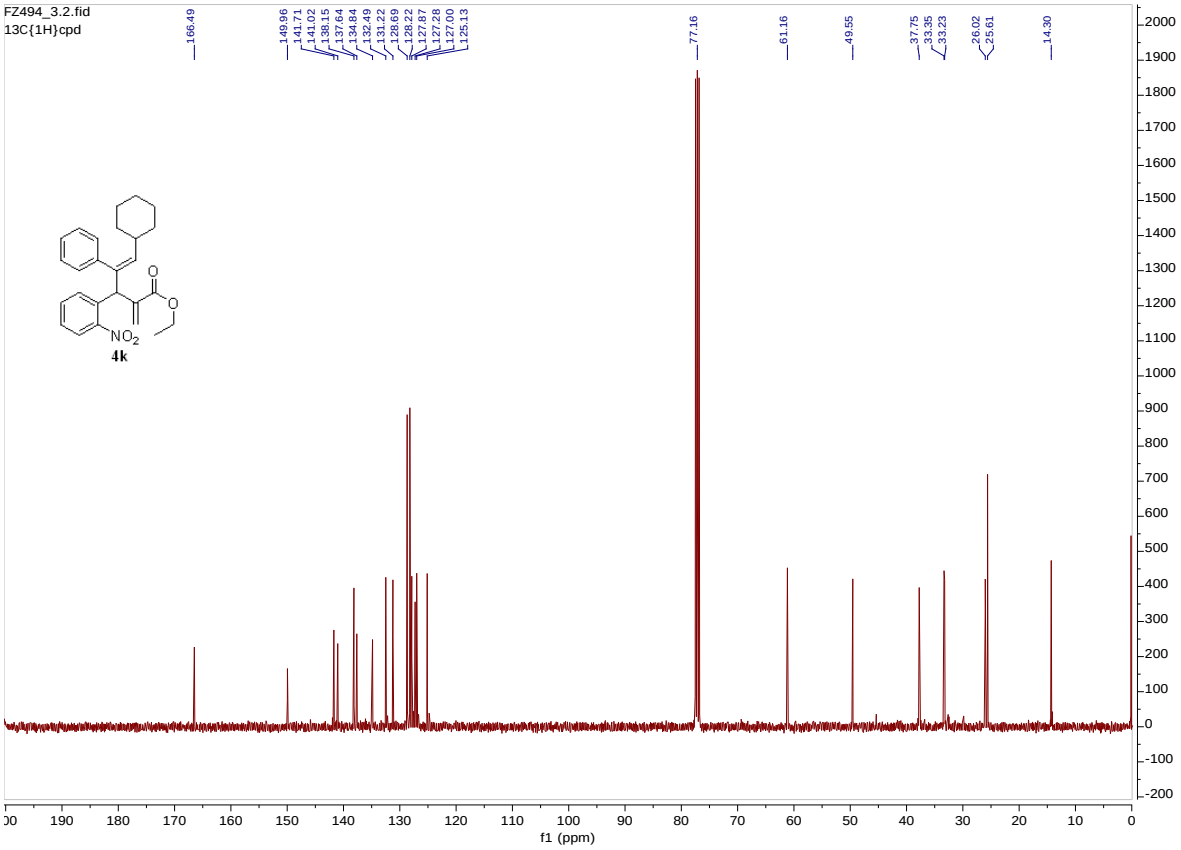
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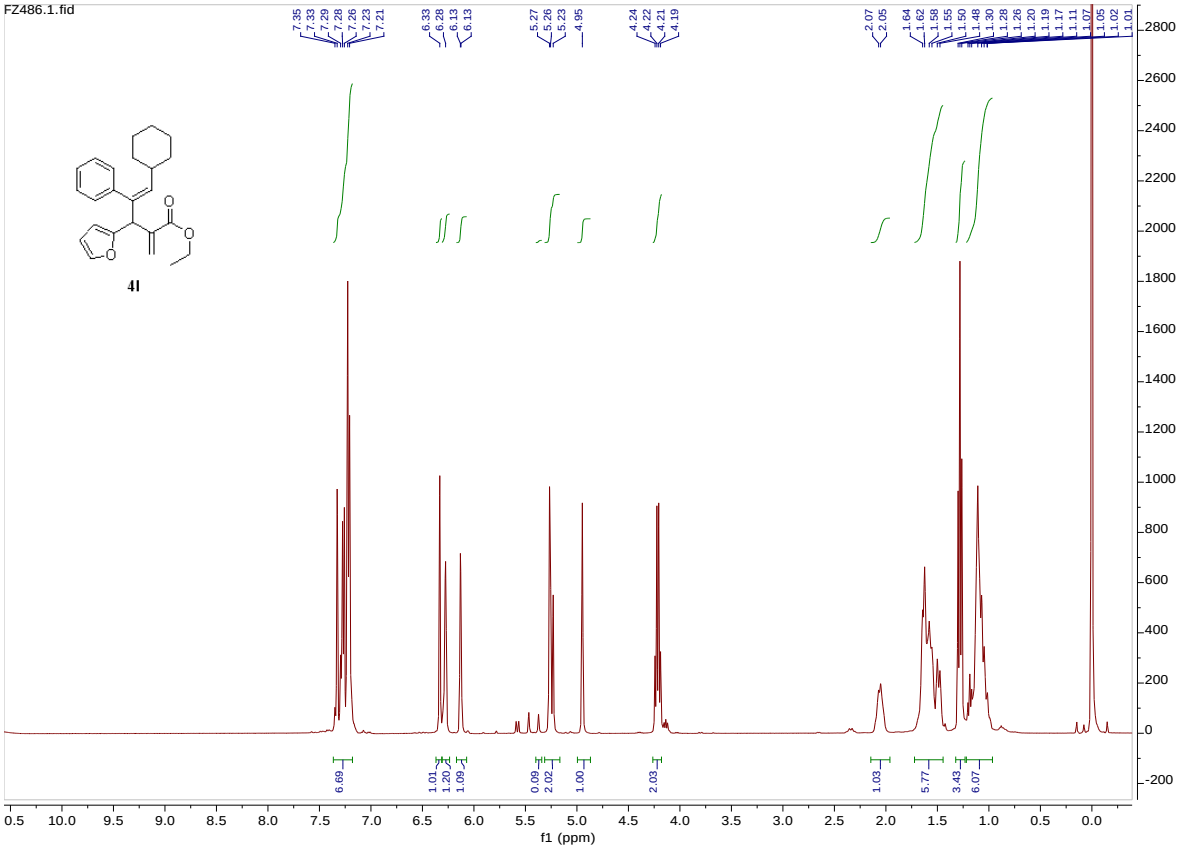
O
NO2
4k
f1 (ppm)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4.22
4.21
4.19
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2.05
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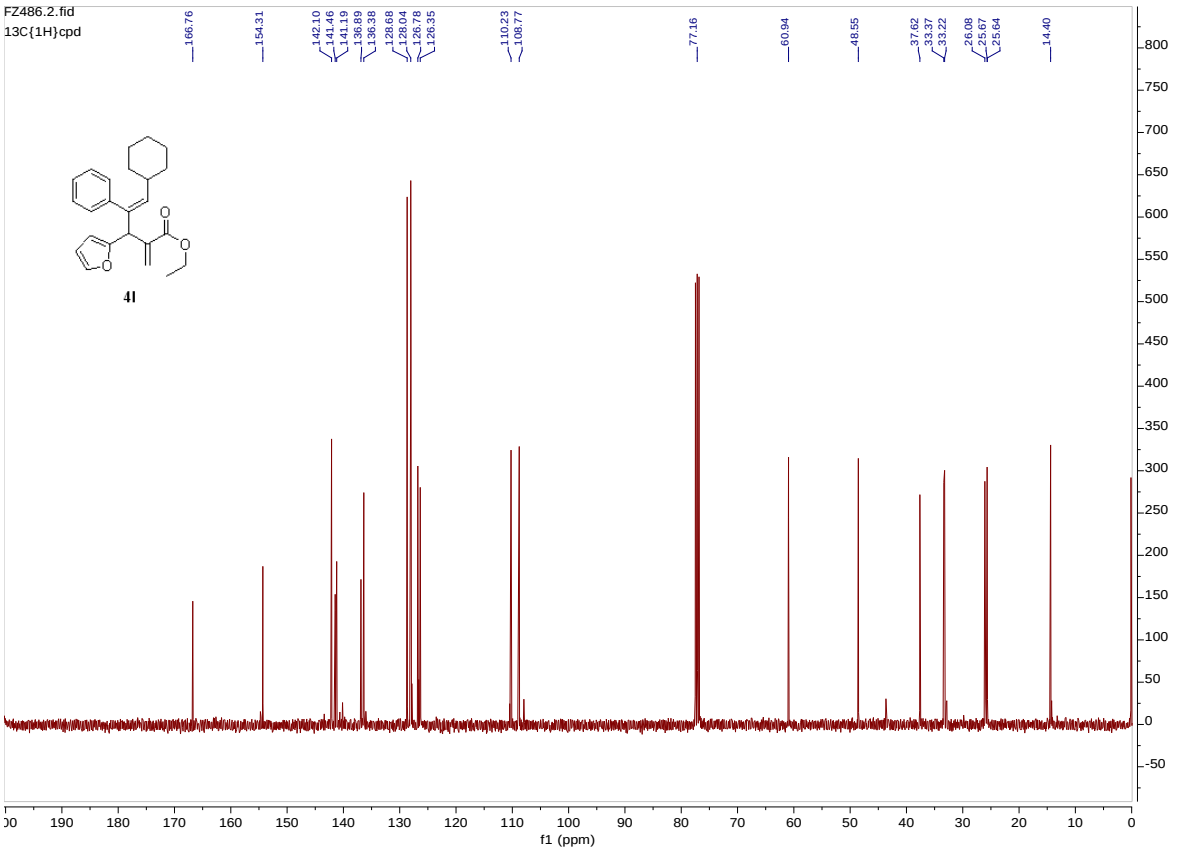
4l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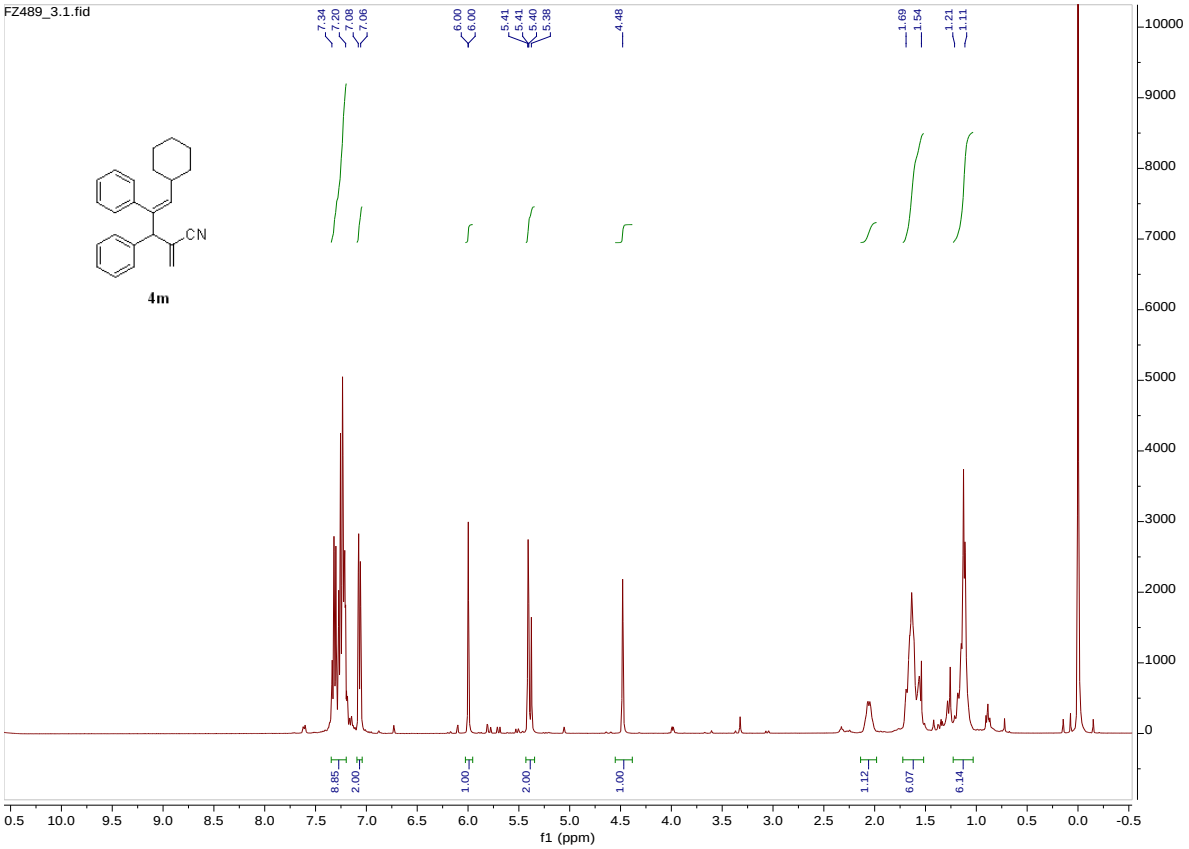
4l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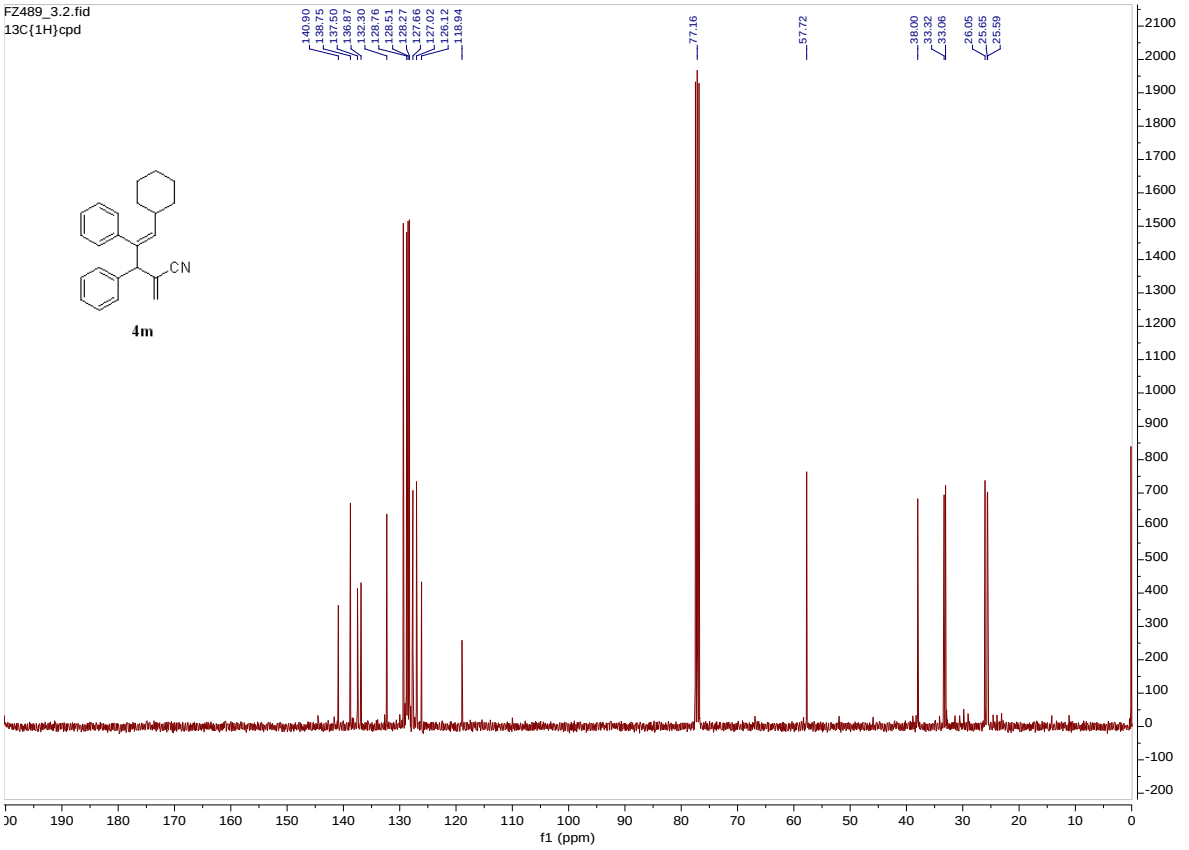
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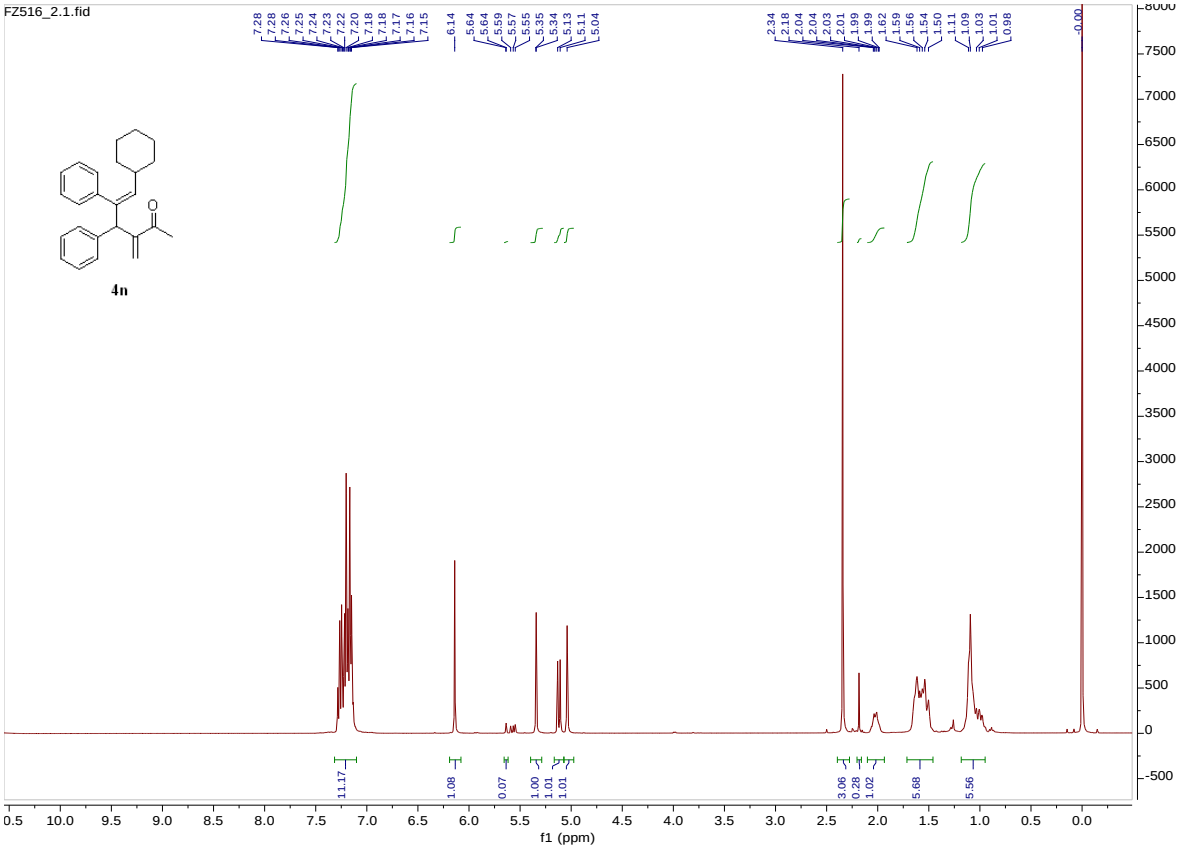
25.65
25.59
CN
4m
f1 (ppm)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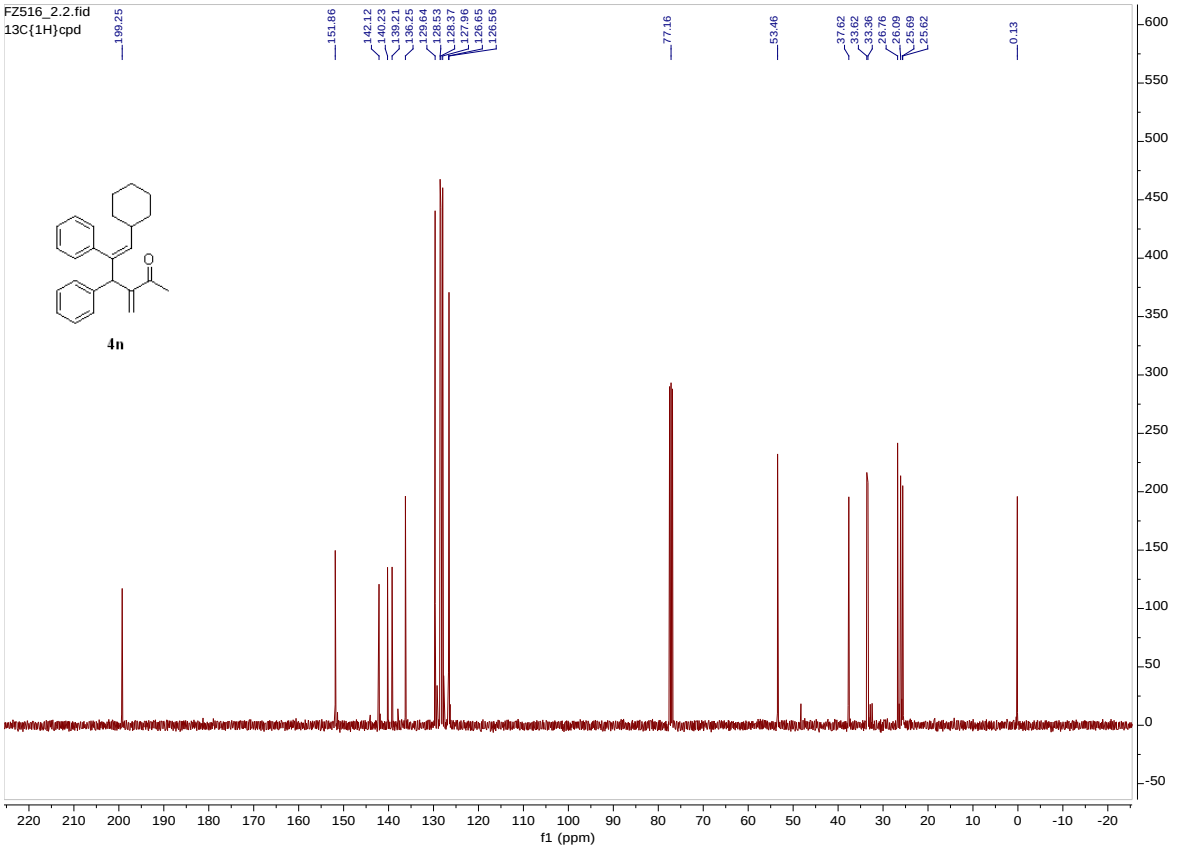
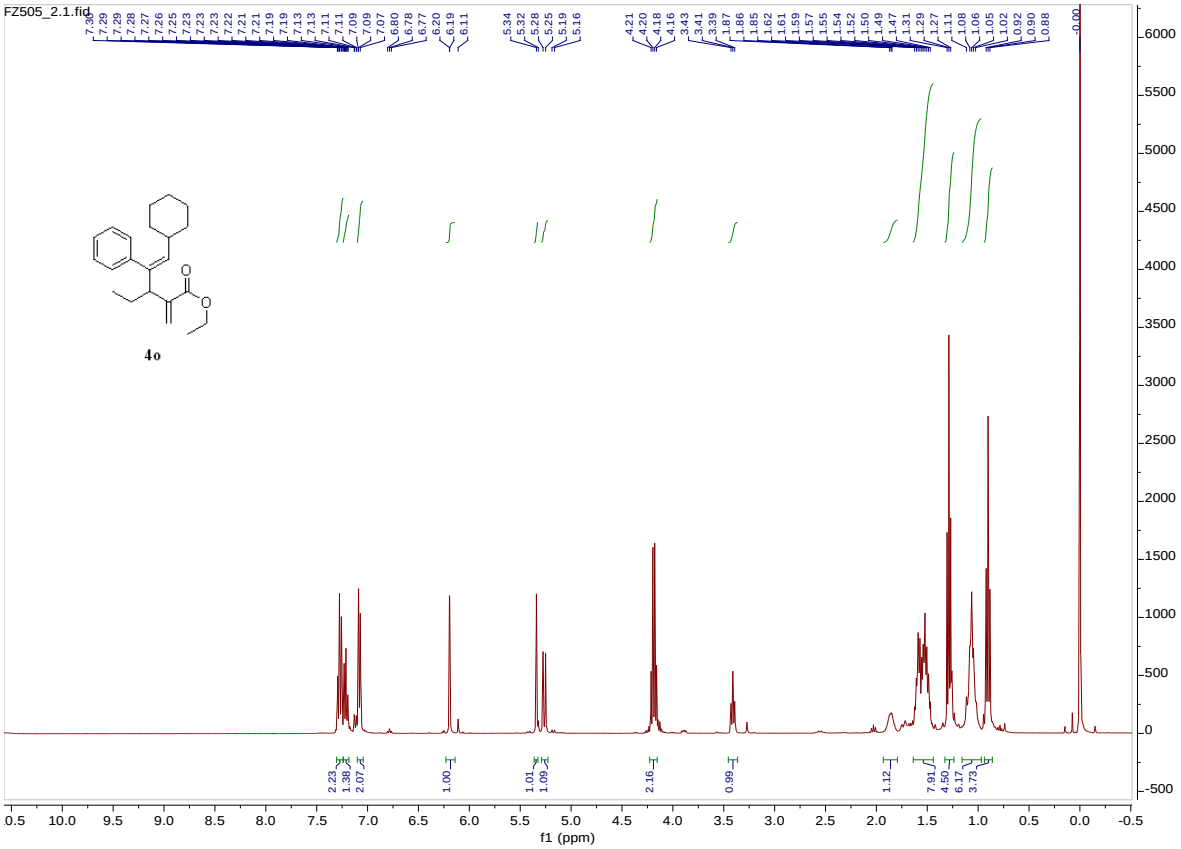
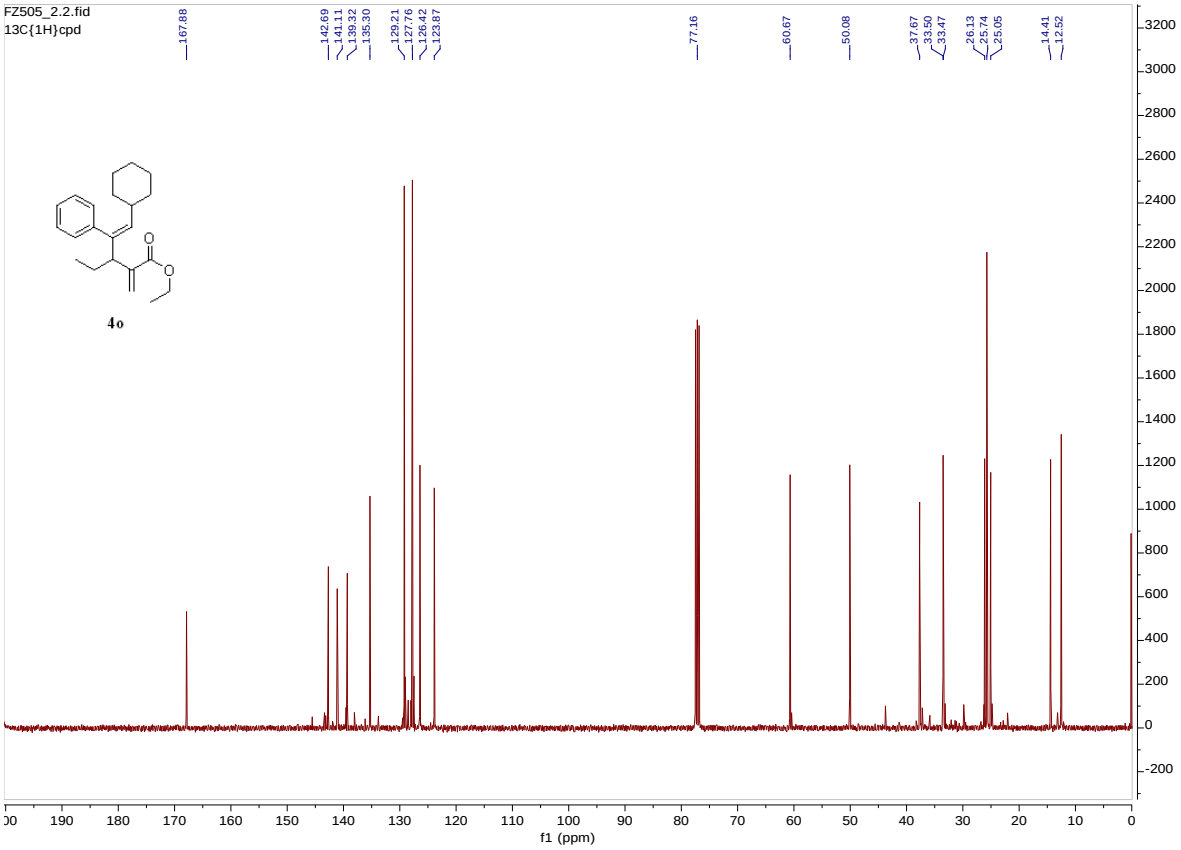
f1 (ppm)


FZ516_2.2.fid
13C{1H}cpd
4n
f1 (ppm)


FZ505_2.1.fid
4o
f1 (ppm)


FZ505_2.2.fid
13C{1H}cpd
4o
f1 (ppm)